Event Management Systems (EMS)

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***Abstract*—This study aims to develop an Event Management Systems (EMS), a web-based application that makes use of a digital event management planning system. EMS enables the customers to organise events on a single console, removing the need to travel to a different console and therefore making the process more convenient. There are four strategies to conduct the research which are technical research, EMS development, mixed method data collection, and data analysis. In addition, this study also presented the system architecture, project plan and implementation of the EMS. Then, the EMS has been tested by 2 users in both client and admin side.**

Keywords—Event Management Systems, mixed method, system architecture, project plan, web-based application.

I. INTRODUCTION

The event management system is used to keep track of all the activities associated with the event. In any case, several service providers operate concurrently, making management extremely difficult. Additionally, it is critical for the event organiser to have all these service provider's contact information on hand so that he may call them at any moment to prepare an event at a certain time. To keep track of all these activities, this study proposed a website. To succeed in the event management industry, the user must have a strong network of service provider relationships. These connections are essentially service providers who can be swiftly recruited to assist with any occasion. (Saleem et al., 2017)

An event may be thought of as a collection of events to which some visitors or participants are invited for a specific period. Various sorts of events may be distinguished, such as cultural festivities, business events such as conferences and product launches and promotions, wedding ceremonies, college activities, and other similar occasions. When it comes to an event management system, it can be thought of as a platform for event administrators to administer events and a gateway for participants to access information. The process of ethically managing an event includes the determination of a budget, the analysis of costs, and the analysis and feedback following the event. This project is an online event management system, or more accurately, a portal in the form of a website, a portal that will aid in the functioning of an event organiser, as well as participants and stakeholders in the event, and will be completed by the end of the year.

Online event management system is a software project that performs the functions of an event manager by providing an online event management system software project. Users can register for an event using the application, which is provided by the system. This is being offered as a web-based application. The project covers most of the fundamental functionality necessary for a certain event type, such as marriage, dance show, birthday party, etc. The system then allows the user to pick the day and time of the event, as well as the location and event equipment, among other things. And then browse various hotel venues and book one that meets their needs, as well as browse various food catering services and book from them. They may check on the availability of party decorators and DJs and make appropriate appointments. Prior to making any bookings, the consumer may study the company's ratings, pricing, and sample work. (Saleem et al., 2017)

All the information is saved in the database, and the user is provided with a receipt number for his or her reservation. The information is subsequently sent to the administrator, who may then communicate with the customer in accordance with his requirements. It will undoubtedly aid the event's organisers and marketing staff in their efforts to advertise the events on the internet, resulting in a significant rise in registrations and participation. Additionally, this portal has been developed with various concerns in mind that event organisers experience while attempting to execute a good event in mind.

II. LITERATURE REVIEW

A. Analyzing the existing system

In the current system, the user interacts with the business to run events. It describes the event's objectives, duration, structure (Composition and/or Exposition, for example), anticipated number of representatives, equipment, and supplies requirements, if guest packs or advertising items will be issued, as well as other essential facilities. (Kirui, n.d.)

The Event Manager thoroughly researches the event's requirements and implements them utilising the optimal schedule. The company offers a range of pre-packaged options. If indeed the consumer is willing, the event is scheduled, and the organization collects the advance charge. Reservations are made in accordance with the event's specifications. A comprehensive timetable is created to ensure the event runs smoothly. The Monitoring System assists the management with many responsibilities related to event planning, schedule, and execution. This technology enables immediate access to occurrence data.

B. System gathering requirement

There are two types of system gathering requirement which are:

- Functional Requirements: Functions and features are described as a combination of features that specify the output behavior of an outside system in the following ways: coherent, straightforward, non-redundant, and non-contradictory.
- Non-Functional Requirements: It really is the non-functional constraints that define the

system's quality. For the practical criteria to be met, the non-functional needs must be met.

C. Domain research

The purpose of the Incident Response Plan is to restore IT infrastructures at Flinders University to normal administrations (as defined in Service Levels) as quickly as possible while minimizing disruption to college partners (Walker, 2011). The Disaster Recovery Plan ensures that a record of incidents is maintained for reporting reasons and that it is integrated with other procedures, such as Troubleshooting, to facilitate continuous change. When an aim is to demonstrate, recording it allows for the opportunity to learn from it and for zones of concern and control inadequacies to be identified. Administrator management is a critical component of ensuring the quality of IT administrators. Each support or issue management procedure must be given a Product Manager. The Service Owner makes every effort to ensure that any issue that may arise under their management is resolved.

Data Hardware and software offices are the most complicated components of organisations, and ITIL is widely regarded as the most widely used IT structure within them. This acknowledged standard is intended to assist organisations' information technology units in implementing quality-based processes with the end goal of enhancing the nature of information technology administrations. ITIL is composed of five components: the task of maintaining, the administration's plan, the management activity, the administration move, and the continuous administrative modification (Sharifi, 2013). Each of these sections contains a number of methods. Each ITIL process is structured around a definition, a depiction of the matter of interest, Critical Success Factors (CSFs), and Key Performance Indicators (KPIs). On the other hand, Control Objectives for Building and Developed New methods (COBIT) is a review and IT-construction system with such a high capability for method prediction (Goldblatt, 2000 and Kirui, n.d.).

Further supports the notion that businesses (Richardson, 2011), as they grow, require the ability to promptly handle and manage incidents and modifications to their IT foundation, services, and configurations. IT organisations are looking for a BSM solution that provides an integrated, automated, and cutting-edge approach while also ensuring a high level of management quality. Additionally, they require a solution that is communicated without incurring the usual high utilisation cost and time. Apart from comprehending the requirements of IT groups, BMC Software must align IT with company goals. To maintain a motivating force and stay the BSM market leader, BMC Software must also continue its tradition of acquiring innovative arrangements that suit its BSM strategy, as BMC Software lacks the in-house asset capacity to construct BSM arrangements in a short time period. And was the first to market with robust IT solutions (not products) in the BSM innovation space in order to comprehend IT challenges is a must for IT management technology companies.

The service continuity management entails the synchronization of administrative recovery, warning, amplification (Nuit, 2011), and event evaluation for all administrators as defined in the Northwestern University Information Technology (NUIT) Service Brochure. This review is meant to provide a high-level overview of the episodes administration. This archive is to be used as a resource for all NUIT workers for them to realise unambiguously the measurements and procedures put in place to manage with an incident throughout administrative reconstruction and occurrences investigation. The post on the Information Management Department Manager emphasises the importance of the Information and Communication Technologies Support Management System in assisting the MISD in providing supportive services. It will act as an electronic ICT management helpdesk accessible to all CFO employees throughout the country. Employees can complain and/or request related services, report an incident, and follow up on requests, among other things. MISD employees can also use the framework to track their reporting. The architecture is relying on to generate information about the condition of equipment, to enable close, available Email addresses, and to handle most common difficulties. The most prevalent method of controlling admission to the present scheme is currently via a login and password combination. However, a password is only as safe as the individual who is using it. They are responsible for securing and protecting the organization's or company's secret, critical information, or documents. According to the preceding objective facts about just the PC and project reporters, the PC makes no errors; nevertheless, the system writers make errors, and all orientations provided to both the PCs are successfully performed. The computer does not think; it can only carry out the actions of a reasoning person. If incorrect information or faulty initiatives are introduced into the computer, the information assessment will result in inaccurate findings. The saying "Junk out. Trash in" encapsulates the issue perfectly. Confidentiality is another critical societal concern in information systems. Essentially, privacy concerns the gathering, use, and misuse of information. The major concern is the security of the information. (Ganciu, n.d.)

D. Similar systems

As is the case with most required to maximize, the suggested system is very distinctive. As a result, the similar ones will be associated on a feature-by-feature basis, while each of those will display distinct relevant features. There are a few systems that incorporate some of the characteristics specified in this research. A comprehensive analysis will be performed to contrast those platforms, to discover what makes them unique, to comprehend their capabilities, and to identify potential pitfalls. Three comparable systems were discovered for review purposes.

- Evolution Events

Evolution Events is an event management company in Dubai. They provide their consumers with beautiful events by being creative and distinctive in accordance with their likes and preferences. They integrate themes, design layouts, event forms, and décor to produce an exceptional positive outcome, making your design-specific event a most exquisite, distinctive, and unforgettable experience, whether the event is business or social. Dubai Fashion Fiesta, Creations, Sheila & Abaya Fashion Week as well as personal wedding, birthday, family-get-together and many more events were organized by Evolution Events. And in response to

tremendous demand, Evolution Events has given models and promoters to over 200 businesses for exhibitions, mall activations, product launches, etc (Evolution Events, 2014).

Evolution events organizes corporate as well as personal events, but just like other websites it doesn't have an option to make an booking online. The website only consists of information on the services the company provides and what all events were previously organized by the company. So when an client wants to organize an event they would either have to visit the company office or contact them through phone or email which can be very time consuming when the client is in rush to book an event or have other important work to complete as well in that case the client would prefer a website where they can just add their booking details and the event provider can work on the rest and contact the client with a complete detailed package according to the client's requirements.

- Swoogo

Swoogo is the industry's leading activity management platform, enabling event planners to accomplish more in less time. Regardless of whether the activities are physical, hybrids, or online, we've got you covered—with the world largest most intelligent registration process, the simplest developmental, and the best client support. Add limitless events, limitless memberships, and unrestricted free connectors to the mix and that you've got a turkey.

Construct registration routes that feel personalised for each registrant using limitless conditional logic, and then generate customized on-page experience with very intuitive, super adjustable related to visual. Assume command of who gets access to the registration data by utilising single on or two-factor verification. To add further layers of protection, all sections can be designated as Identifying Information, Request to be Remember, or Application for Permission. Swoogo complies with PCI, GDPR, and Compliance regulations.

- EventMobi

Event organisers can easily plan, market, monetize, and execute compelling virtual, hybrids, and then in event interactions using EventMobi's end-to-end activity management system. Since 2009, the EventMobi technology has been utilized by 10,000+ event organizers in 72 countries. It includes a webpage, registrations, and a prize event application, as well as a Digital World and highly scalable online event management. Regardless of whether they host one conference or thousands, the events management framework automates the process so that you can spend a lot of time designing interesting audience engagement for the visitors and much less time handling technologies.

With a single system, create stunning event management webpages and email announcements, gather registrants, and keep a look at guests. Provide engaging audience engagement for any customers with one-of-a-kind, professionally customized Meeting Spaces and light skinned Mobile Applications. Build an unrestricted number of concurrent and concurrent online and digital conferences, and effortlessly share stories with both audiences. Utilize integrated streaming video, integrate any technology for communication, and configure Converters streaming credentials and internet live streams. To the most comprehensive suite of interaction capabilities available on any event system, engage and enlighten there in as well as virtual audience. Real-time tracking of participant enthusiasm, involvement, and behaviour from the simple dashboards streamlines analysis on the festival's Impact.

III. PROBLEM STATEMENT

Festival, event, and conference management is the programme that is used to plan, manage, and organize these gatherings. The proposed job includes conducting research to determine the budget, cost, and analysis objectives. Post-event analysis and assuring a return on investment have emerged as important drivers for the event sector in recent years. A software project for an online event management system, which provides the capabilities of an event manager, is being developed. Most of the resources are provided by the project. Currently, most event management companies manage the booking and planning of events in the traditional manner, which requires the customer to visit the office and explain to the agent how they want to conduct the event, what their requirements are, when and where they want to conduct the event, how many people they want to invite, and so on. This takes a significant amount of time and effort (Goyal et al., 2021). Currently, most event management companies manage the booking and planning of events in the traditional manner, which requires the customer to visit the office and explain to the agent how they want to conduct the event, what their requirements are, when and where they want to conduct the event, how many people they want to invite, and so on. This takes a significant amount of time and effort (Waida, n.d.).

Another issue is that most event management web applications offer packages of services such as hotel venue, DJ, food catering services, and decorations from which customers can choose, but none of them offer a variety of options at each stage of the planning process as well as none of the event management website provide a direct contact with the event provider or can communicate on chat through the website if they have some query. (Ganciu, n.d.)

Additionally, some customers are stressed out by the event management online application since the web application is difficult to use and the client does not know how to utilize it. In addition, most web applications do not provide a platform for customers to message the provider and speak with them if they have any questions about the service. For example, where should they begin planning and how should they book an event are just a few of the things that cause confusion for customers. The most fundamental capability necessary for an event. It provides the user with the option of selecting from a list of event kinds. The 'EVENT MANAGEMENT' application has been created with the issues that might arise when putting together a good event in mind. This allows customers to arrange an event on a single console, eliminating the need to navigate to a different console, making it more comfortable for them. This programme simplifies the process of event planning and management.

IV. AIMS AND OBJECTIVE

To assess, develop, and implement a web-based application that makes use of a digital event management planning system that enables customers to organise events on a single console, removing the need to travel to a different console and therefore making the process more convenient.

To accomplish the project's purpose, the following objectives have been identified and articulated:

- To assist users to plan, coordinate and source the event.
- To increase customer's satisfaction rate by drawing more attention towards the online approach of organizing an event rather than searching around for different event management companies.
- To compile requirements for a web-based event management system.
- To conceptualize or model a web-based event management system
- To validate, test, and implement the system that has been created.

V. RESEARCH METHOD

A. *Technical Resarch*

This technical study examined critical development factors. Technical decisions for the project have been based on comparative investigations. The technologies used should work well together and maintain a good overall performance. To recapitulate, the suggested system will be written in two programming languages (Mariappan, 2017). React JS for the front end and Express.js for the back end. Will be used to construct the backend. It will be the primary development platform, utilising Microsoft's Visual Studio Code 2019 as an IDE. With express.js and MongoDB combined, the DBMS can correctly handle any query conducted by express.js, with Node.js serving as the system's web server of choice.

Additionally, the markups will make use of the CSS framework Tailwind to improve user interface design. On a PC running Microsoft Windows, you can use the most recent versions of Google Chrome, Mozilla Firefox, Safari, or Microsoft Edge. This concludes the technical discussion begun in the preceding paragraphs.

TABLE I. SUMMARY OF SELECTED CHOICES

Type	Name	Version
Development Framework	React.js	Version 17.0
	Express.js	Version 4.17.1
Interactive Development Environment Software	Visual Studio Code 2019	Version 16.9
Database Management System	Google Firebase	Version 5.0
Operating System	Microsoft Windows	Windows 10 Home
Web Server	Node.js	Version 13
Web Browser	Google Chrome	95.0.4638.54

According to the developer, an efficient web application will be produced by combining all these technologies, who has thoroughly compared each of them. Following the selection of all technical aspects of the present project, the version of each development tool will be established. Table I details which tools and elements were chosen for implementation, along with their current versions.

B. *EMS development*

Rapid Application Development (RAD) will be used to construct event management that consists of four parts (Lucid, n.d.). These steps will be carried out in various order to ensure that the strategy is most appropriate for the project:

1. Preliminary Planning Requirements

This phase is reflected by a scoping meeting for the project. Although the planning part of this web application development project is brief in comparison to those other project management methods, it is crucial to the project's success. After establishing the project's objectives and expectations, the supervisors should really be approached to address any present or potential issues that may develop during the implementation stage. This process entails researching the current issue, defining the project's needs, and finalising those specifications with all stakeholders. Additionally, this process entails conducting analysis of the current issue, defining the needs for this web project, and completing the specifications including all players, particularly customers and organization authorities, to ensure a seamless execution. A positive relationship with the supervisors and other stakeholders will result in communicating (Creatio, 2021).

2. User Interface Design

Throughout that phase, the user experience will be designed in stages. To assure the success of any project, a number of prototypes will be built with varying features and capabilities. To determine whether any modifications or improvements are necessary, the product will first be subjected to user testing. Prototyping iterations may begin following the definition of the scope and requirements for a web app development project. If we compare the RAD technique to other project management methodologies, it is the user design that sets itself apart from the rest. This stage involves collaboration among partners to identify that requirements are addressed throughout the design process, enabling testing of each prototype at each iteration level of something like the iterative process. While the developer of the project is working on the concept, it will be reviewed as many times as it takes until a satisfactory design is achieved (Stiner, n.d.).

3. Accelerated Construction

The developer takes user-designed prototype and testing solutions from the early development stage and converts them into a functional mobile model during the rapid development stage by applying necessary codes. The programmer of this software platform was able to provide a usable product considerably faster compared if they'd used a more conventional method. This step is critical since the programme will be designing and building the event management system. The developer will construct the systems using a visual studio 2019 professional website tool. This is reflected in terms of the software's enhancements and a description of the company's final results. Following the coding of software, three levels of testing will occur: unit, integration, and framework. Finally, it will be a fully functional model ready for release.

4. Transition

After the product has been authorised, developers apply final touches such as validation, conversions, interface design, and user training. Once the product has been properly examined for factors such as reliability and longevity, it is ready for delivery. The final stage of this technique is to hand over the software to our client once a full functioning system has already been produced. (Stiner, n.d.)

C. Data collection

Quantitative and qualitative data are gathered from a random sample of participants via a questionnaire and an interview. According to the report, researchers who did a literature review, discovered comparable concerns in the suggested web app, which assists in online event planning and management. As a result, each item in the questionnaire is declared to serve a distinct purpose. Researchers can utilise this study approach to acquire a better understanding of user behaviour and expectations for the proposed web application. This knowledge will motivate researchers to develop a more user-friendly product.

Additionally, two interview studies are planned to gather information about event planning and management. Interviewing two event planning specialists is important to have a thorough understanding of the event planning and management domain for the current project's product, an online event planning and management web application. Projects can utilise this information to ensure that all pertinent and acceptable elements are included in the final product that results from the interview that gathered all pertinent and applicable information on online event planning and management.

D. Data analysis

During the study approach evaluation, the researcher observed both positive and negative outcomes. The outcomes of the study can help researchers better grasp what consumers and system administrators expect from the proposed strategy. Clients and event planners will benefit from the outcomes of this study as the developer improves the proposed mobile application for residential garbage management. For example, the researcher's analysis gave him a broader perspective on the topics, allowing him to draw more informed conclusions from his questionnaire and interview replies.

The survey findings show that most respondents liked the application's many features and its recycling value. Based on the responses, the researcher could determine respondents' understanding of and attitudes about environmental safety, venue selection, and frequency of celebration, current recycling techniques, and the suggested application itself. The presentation was well-liked, judging by the feedback The system should, the developer decided after analysing the questionnaire. In general, the system will be web-based. The researcher chose to continue since most respondents believe in the application's value. Therefore, a fully working mobile waste management application will be created.

It was determined through the discussion with the firm's administrative employees that Individuals lack standards, which is one of the most difficult and critical issues to fix since it impacts everyone. Second, individuals lack confidence in event planning because they lack feedback or validation for their efforts. Language Separation - Employers may hire workers from all around the world using smart labour suppliers. Operation managers who speak their native language will be in demand. This extra effort pays off in the form of industrious workers due to Malaysia's diversified population. A large audience must be educated about the environmental effects of poor event design and administration. Event management services should improve their procedures to increase production.

Aside from that, the software engineering specialist exhibited and validated the project's declared technical characteristics during the second interview inquiry. The sole choice made utilising the IT professional's interview information is the system design. Not having settled on a system architecture, the IT expert's advice for software architecture was applied immediately to the current project. During the system development process, data collection research is vital to provide a high-quality system that meets and exceeds users' expectations. Approval of all project decisions leads to the creation of a fully working online event planning and management.

VI. SYSTEM ARCHITECTURE

A. Admin Features

Using their login and password, the administrator logs in. The admin logs into their administrative control panel. After login in as an admin, the system's dashboard is presented, which contains options such as see booked Slot and delete Slots for managing the scheduling system. The administrator can review the client-sent messages just below bookings and either reply or delete a message. The administrator could then log out from the system to guarantee adequate security enforcement.

- Login

This feature allows the admin to log into the system by adding their special username (email id) and password and clicking on the “Sign up” button so then the admin will be redirected to the main page.

- View Bookings

Admin can view all the booking and their details like booking name, phone number, type of event, total number of guests, date, time and the selected venue on this page. Each booking is in a separate card format. The developer has added a single booking strategy where each booking will be shown alone and one at a time according to the chosen hotel, so the admin can view the event booking on a first come first served basis so they will know which client to give first priority if there are any conflicts between the booked venue's date and time.

- Manage Bookings

Admin can manage all the booking, all the bookings with the same hotel are placed together one after another in a card format, as well as there is a “Delete” button below each and every booking so that the admin can delete the completed or canceled bookings.

- View Messages

This feature allows the admin to view the client’s message. The messages appear in a card format one after another and on top of the message the user name of the client is mentioned. The admin can also view the whole chat history with the clients. So that any miscommunication later can be avoided.

- Respond to Messages

This feature allows the admin to respond to the client’s message, just below the client message there is a box field where the admin can add their response and click on the “Send Response” button to reply to the client's message.

- Delete Messages

This feature allows the admin to delete the message. Just below every message there is a "Delete" option which the admin can click to delete any specific message.

- Logout

The "Logout" button is on the top right of the website so whenever the admin wishes to logout of the system the admin just has to click on that button and this function allows the admin to logout from the system. When the admin wants to logout, clicking on the logout button is very important as the system has an authentication cache feature so that even when the admin closes the browser the system will not log them out.

B. Client Features

The website dashboard displays all client-facing system functions and outputs. The upper right corner Offers the options New Booking, Message us, Our services, and Logout to the user.

When the client register/login to the system they are presented with the home page, if the client wants to book a new event they can click on the new booking option and fill out all the details and click on the "set your booking" button to successfully book their event, if the client wants to ask any queries or give add more requirements or want to make any changes in the booking they can click on the message us button and message the event provider, clients can event view the services provider by the company on Our Services page and by choosing the logout option, the user can then exit the system.

- Register

When a new user visits the website, they can register themself by adding username (email address) and password and then click on the "Sign up" button so that a new account will be created for that user so they can explore the system and book an event. To lower the barrier between both the user and the website, the developer created the registration page so that there are only 2 forms that the user must fill out in order to register themselves.

- Login

This feature allows the user to log into their already registered account by entering their username (email address) and password and clicking on the "Sign in" button so then the user will be redirected to the home page.

- View Services

Once the user has registered or logged into the system they can click on the "Our Services" button to check out the services provided by the Fruition Event Planners.

- Book New Event

The user can book a new event by click on the "New Booking" button and filling out the booking form which consists of details such as their booking name, phone number, type of event, total number of guests, date, time, and they can select the venue from the given 5 hotel options and click on set your booking to successfully book their event. The developer also included a visible clock to choose the time and a calendar to choose the date to make it more user-friendly and easier for the clients.

- Send and View Message

The user can click on the "message us" button to talk to the event provider if they have any queries, want to make any changes to their booking, want to add extra requirements, change the event or cancel the event. They can message the event provider as well as view their response on the same page. The client can also view the whole chat history with the event provider. So that any miscommunication later can be avoided. For the purpose of making it simple for clients to comprehend which response is for which query, the developer has incorporated a solitary messaging approach where each message will be presented alone with its unique reply.

- Logout

The "Logout" button is on the top right of the website so whenever the client wishes to logout of the system the client just has to click on that button and this function allows the client to logout from the system. When the client wants to logout, clicking on the logout button is very important as the system has an authentication cache feature so that even when the client closes the browser the system will not log them out.

VII. PROJECT PLAN

User Acceptance Testing (UAT) often referred to as beta testing or end-user testing, is the stage of software development where the target audience or a company representative tests the program in the "real world." Instead of being menu-driven, this kind of testing is meant to be carried out by business users to ensure that the application will satisfy the demands of the end user, using scenarios and information that reflect actual usage in the field (Stanford, n.d.). UAT is essential since it helps guarantee that the web-based system works properly in actual usage scenarios. Before the system is released to end users, it enables any flaws or defects to be found and corrected. Furthermore, addressing negative user input sooner during UAT minimizes the amount of issues users encounter when the system is implemented (Orient, 2021).

VIII. IMPLEMENTATION

The following includes screenshots of the event management system and a brief discussion of the HCI principles used in the web pages.

A. Register Page

Fig. 1 is the screenshot of the register page where any new client who wants to book an event can enter their Username (email address) and Password and click on the "Sign Up" button to create an account and then they will be redirected to the home page as well as if the user already has an account on this website an option of "Have an account? Sign in" is also available which will redirect users to the login page. The developer has designed the register page in such a way that the form is as short as possible to reduce the barrier between the user and the website so there are only 2 fields required to be filled by the user to register themself. The implementation of "Aesthetic and minimalist design" concept of HCI is used to develop this web page as prioritization was given to the most important and necessary options. All of the information offered on the page is free of extraneous components and content that does not serve the tasks and the purpose of this page.

Fig. 1. Register Page.

B. *Log in Page*

Fig 2. is the screenshot of the login page where users who already have an account can sign in by entering their username (email address) and password and clicking on the Sign in button to login to their account and they will be redirected to the home page as well as for the users who don't have an account yet on this website there is also an option of "Don't have an account? Sign up" which the user can click, and the user will be redirected to the register page. The developer has designed this page by using "ease of use" HCI concept where it is easy and straightforward for the user to login.

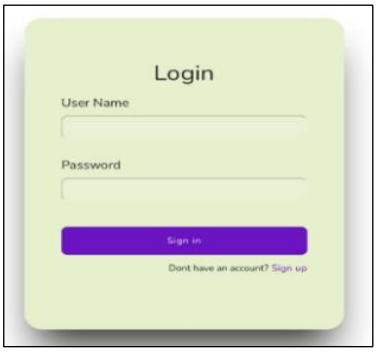

Fig. 2. Log in Page.

C. *Home Page for Clients*

Fig.3 shows the home page of the Fruition Event Management System which is shown when a user registers or login. At the top left of the website there is the website name "Fruition" which means fulfillment of a plan or project, logo, and tagline "Life is an Event". Then at the right top there are different feature buttons such as "New Booking" feature which users can click to book new events, "Message Us" feature which users can click to message, communicate, ask any queries or give their feedback to the event provider, "Our Services" feature where users can view all the services provided by the Fruition Event Planner and "Logout" feature which user can click to logout of their account and there will be redirected to the login page. The developer has used the "User control and freedom" HCI concept which allows the user freedom and control. For example, if the user accidentally clicked on the incorrect button and landed on a different page of the website, the user can just click at the logo of the website at the top left of the screen which will redirect the user back to the home page.

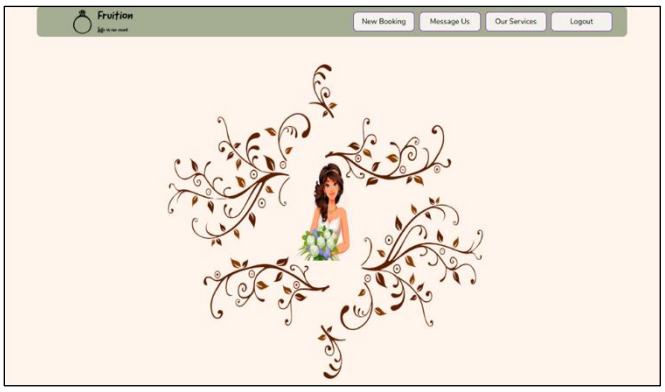

Fig. 3. Home Page for Clients.

IX. User Acceptance Testing (UAT)

Three target users will perform user acceptance testing: 2 users who wish to arrange an event will test the client side of the system and a staff member at an Event Management Company will test the admin side of the system. It is important to test the software before officially launch in order to control the quality and reliability of the software (Bajjouk, et. al., 2021).

TABLE II. User Acceptance Testing 1

Name :	Mr. Rajat Madhu (Client)				
Occupation :	Student at Asia Pacific University (who wants to plan an event)				
Location :	Online		**Mode :**	Microsoft Teams	
Date :	17/07/2022	**Start Time :**	04:00 Pm	**End Time :**	04:20 Pm
Criteria :	**Strongly Agree**	**Agree**	**Neither**	**Disagree**	**Strongly Disagree**
GUI	✔				
Ease of Use	✔				
Functionality	✔				
Consistency	✔				
Performance	✔				
Comments from Tester :	The system is very user-friendly and straightforward. Adding a calendar to select date and a clock to add event time is a good thing to get users attentio and make it easier for users. Great Work.				
Feedback from Developer :	Thank you so much for testing the system and giving such positive feedbacl				

TABLE III. User Acceptance Testing 2

Name :	Mrs. Sejal Shah (Client Test)				
Occupation :	House Wife (who wants to plan an event)				
Location :	Online		**Mode :**	Google Meet	
Date :	18/07/2022	**Start Time :**	11:00 Am	**End Time :**	11:20 Am
Criteria :	**Strongly Agree**	**Agree**	**Neither**	**Disagree**	**Strongly Disagree**
GUI	✔				
Ease of Use	✔				
Functionality	✔				
Consistency	✔				
Performance	✔				
Comments from Tester :	The system is very easy to use and understand, especially the interface is quite attractive, it is very minimalist which is good in a way too that it's just to the point and gets the work done of booking an event.				
Feedback from Developer :	Thank you so much for testing the system and giving such good reviews. It' highly appreciated.				

TABLE IV. USER ACCEPTANCE TESTING 3

Name :	Mrs. Damandeep Kaur (Admin Test)				
Occupation :	Staff at Messefrankfurt (Event Management Company)				
Location :	Online		**Mode :**	Google Meet	
Date :	18/07/2022	**Start Time :**	11:30 Am	**End Time :**	11:50 Am
Criteria :	**Strongly Agree**	**Agree**	**Neither**	**Disagree**	**Strongly Disagree**
GUI	✔				
Ease of Use	✔				
Functionality		✔			
Consistency	✔				
Performance	✔				
Comments from Tester :	Overall, the system works well and the best part is that it has a direct messaging service with the event provider. But the functionalities are a bit less like adding more options to book venues would be better.				
Feedback from Developer :	Thank you so much for testing the system and for such positive feedback, it greatly valued. The developer will look into this concern and work on addin more venue options for users to select from.				

Developers discovered small flaws once extensive unit testing was completed, and they were able to rectify the problem to guarantee that the user requirements were met quickly. Although it takes a lot of time, this step is crucial for minimizing flaws and detecting as many problems as possible. These problems can be discovered early since the developer can fix the faults without affecting other routines or the unit's missing components. In the meantime, as UAT is tested by individuals with various backgrounds, it offers various viewpoints, enhances the testing phase's quality, and contributes worthwhile suggestions to the web-based system.

X. CONCLUSION

This project has created a web-based system for booking events that could be used to book any kind of event such as weddings, birthdays, meetings in Malaysia. This web based system is developed in such a way that anyone who wants to book an event can directly create an account on the website and their booking details and the rest will be left on the event provider to source the client with the best event, this web based system also allows clients to be in direct contact with the event provider by online messaging where they can ask their queries, cancel their booking or make changes to their booking, etc. One of the major strengths of the system is that no face to face meeting is required with the event provider but still the user can get the perfect kind of event that the user desires.

As well as, The issue that was raised in several earlier studies has been effectively resolved by the developer, who has also presented a workable architecture for the suggested solution. Additionally, the investigator is informed by the analysis of the literature that occurrences may be more advanced because new technology is advancing daily. The data suggests that the future of events will be more likely to take place digitally since, as we can see from the beginning of the COVID 19 epidemic, everything is moving online.

Critical development elements were addressed in this technical investigation. Comparative research has served as the foundation for the project's technical judgments. The used technologies must cooperate properly and maintain a high level of performance. Visual Studio, Firebase, React Js combining all of these technologies will result in an effective web application, claims the developer, who has carefully compared each of them.

Once thorough unit testing was complete, the developers found minor problems and were able to fix them to ensure that the user requirements were swiftly satisfied. This stage is essential for minimizing defects and identifying as many issues as possible, despite the fact that it takes a lot of time. Since the developer may correct the errors without impacting other procedures or the unit's missing components, these issues can be identified early. Meanwhile, as UAT is evaluated by people from varied backgrounds, it gives a variety of opinions, improves the standard of the testing phase, and provides valuable ideas to the web-based system. With proper execution of the design, the target user may use the web application without any misunderstanding. All the capabilities offered in the EMS web application are meant to be user-friendly to make it easier for customers to schedule an event and use it. Users were delighted by the straightforward and user-friendly design that is easy to grasp during the demonstration and user acceptability testing phase of the EMS online application, and three out of three testers expressed satisfaction with it. Users were generally happy with the project, and it met the broad aims and goals set forth at its inception.

For the conclusion, the developer must acknowledge that the technological features used might not be as robust as those of other virtual platforms. There are many areas for development, particularly capabilities that developers seek to include in Event Management System, due to variables like time constraints, limited technical expertise in programming languages, and restricted access to resources, especially during Movement Control Orders (MCO). For future enhancement, to increase system functionality and address the found constraint, the developer intends to further upgrade the website beyond its current scope. The programmer will work on including a new function.

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